

We claim:

1. An at least partially implantable hearing system comprising:
at least one electromechanical output transducer;
a micromanipulator for positioning the transducer and for fixing the transducer in a position set by the micromanipulator, the micromanipulator being adapted to be fixedly attached by fixing means to a cranial vault; and
a releasable coupling unit disposed between the transducer and the micromanipulator, said coupling unit, in an assembled state, fixing the transducer with respect to the micromanipulator, and, in a released state, permitting removal of the transducer from the micromanipulator.
2. The system as claimed in claim 1, wherein the releasable coupling comprises a transducer-side coupling element and a micromanipulator-side coupling element, said coupling elements being adapted to be selectively mechanically engaged with each other and disengaged from each other, respectively.
3. The system as claimed in claim 2, wherein the transducer-side coupling element is designed for being fixedly connected to the transducer already during production of the transducer.
4. The system as claimed in claim 2, wherein the transducer-side coupling element is designed for being fixedly connected to the transducer in the course of an implantation of the transducer.
5. The system as claimed in claim 2, wherein the micromanipulator-side coupling element defines means for receiving the transducer-side coupling element.
6. The system as claimed in claim 2, wherein at least one of the coupling elements is at least partially made of elastic material.
7. The system as claimed in claim 6, wherein the elastic material is a soft polymeric material.

8. The system as claimed in claim 2, wherein both coupling elements are made of non-elastic material.

9. The system as claimed in claim 8, wherein the non-elastic material is selected from the group consisting of hard polymeric materials, biocompatible metals and ceramic materials.

10. The system as claimed in claim 1, wherein the releasable coupling unit is a snap-in coupling.

11. The system as claimed in claim 2, wherein the micromanipulator-side coupling element defines a rigid annular receiver member, and wherein the transducer-side coupling element is at least partially elastic and adapted to snap into the rigid annular receiver member in a substantially axial direction.

12. The system as claimed in claim 2, wherein the micromanipulator-side coupling element comprises an expandable fork, and wherein the transducer-side coupling element is adapted to be snapped into the fork in a substantially radial direction.

13. The system as claimed in claim 2, wherein the micromanipulator-side coupling element comprises an expandable receiver member, and wherein the transducer-side coupling element is adapted to be inserted into the receiver member in a substantially axial direction and to be locked in a position in which the transducer-side coupling element is detained.

14. The system as claimed in claim 2, wherein the micromanipulator-side coupling element comprises a pair of expandable tongs, and wherein the transducer-side coupling element is adapted to be introduced between the tongs in a substantially axial direction.

15. The system as claimed in claim 14, comprising locking means for locking the expandable tongs in a closed position in which the transducer-side coupling element is detained.

16. The system as claimed in claim 15, wherein the locking means comprise a sleeve which is mounted for sliding movement along a portion of the tongs.

17. The system as claimed in claim 1, wherein the releasable coupling unit comprises a plug-type coupling including a pair of coupling elements one of which is adapted to be inserted into the other one, said coupling elements, in the assembled state of the coupling, being held engaged with each other by an interference fit.

18. The system as claimed in claim 17, wherein said one coupling element includes a dovetailed portion and said other coupling element includes a complementary receiving groove adapted to receive the dovetailed portion.

19. The system of claim 2, wherein at least one of the two coupling elements is rotationally symmetrical.

20. The system of claim 2, wherein the micromanipulator-side coupling element is axially symmetrical with respect to an axis of the transducer.

21. The system of claim 1, wherein the electromechanical output transducer is selected from the group consisting of electromagnetic, electrodynamic, magnetostrictive, dielectric and piezoelectric transducers and of combinations of such transducers.